## AMENDMENTS In the Claims

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## 44.(canceled)

1	45.(canceled) A method for noninvasive analysis of blood comprising the steps of:			
2	irradiating blood in a big vein associated with an underside of a patient's tongue with			
3	radiation having at least one frequency or wavelength;			
4	detecting a response from the blood irradiated in the irradiating step;			
5	calculating a concentration of a blood component, a value of a blood parameter or a mixture			
6	or combination thereof from the response.			
1	46.(canceled) The method of claim 45, further comprising the step of:			
2	displaying the response, the concentration and/or the value from the calculating step.			
1	47.(canceled) The method of claim 45, wherein the detecting step comprises the step of:			
2	utilizing one or a combination of techniques selected from the group consisting of reflectance			
3	technique, confocal technique, scanning confocal technique, polarization techniques, interferometry,			
4	optoacoustics, low coherence interferometry and reflectometry, techniques based on speckle			
5 .	measurements, fluorescence technique, Raman scattering technique, and two or multi-photor			
6	techniques.			
1	48.(canceled) The method of claim 45, wherein the wavelength of the radiation is from about 200			
2	nanometers to about 20 microns.			
l	49.(canceled) The method of claim 45, wherein the radiation has comprises a single wavelength or			
2	frequency or a plurality of wavelengths or frequencies.			
1	50.(canceled) The method of claim 45, wherein the response corresponds to a concentration of			
2	hemoglobin in the blood and the wavelength of the radiation is selected from the group consisting			
3	of 548 nm, 568 nm, 587 nm, and 805 nm, from about 400 nm to about 640 nm and from about 112			
4	nm to about 1130 nm.			
1	51.(canceled) The method of claim 45, wherein the blood component is selected from the group			

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2	consisting of hematocrit, hemoglobin, glycosylated hemoglobin, nemoglobin and glycosylated		
3	hemoglobin, glucose, cholesterol, oxy-hemoglobin, deoxy-hemoglobin, and carboxy-hemoglobin.		
1	52.(canceled) The method of claim 45, wherein the blood component is an exogenous substance		
2	selected from the group consisting of a drug, a dye or other reporter in a molecular state or a partic		
3	made of a liquid, a gas, or a solid, a combination of a liquid, a gas, or a solid, and a layered structure.		
1	53.(canceled) The method of claim 5152, wherein the exogenous substance is selected from the		
2	group consisting of indocyanine green and Evans blue.		
1	54.(canceled) The method of claim 52, wherein the exogenous substance are particles having a size		
2	from about 0.1 nanometer to about 10 microns.		
1	55.(canceled) The method of claim 45, wherein the radiation is selected from the group consisting		
2	of microwave radiation, radiofrequency radiation, ultrasound radiation, and low-frequency		
3	electromagnetic radiation.		
1	56.(canceled) The method of claim 45, further comprising:		
2	performing the detecting step in the presence of a static electric or magnetic field.		
1	57.(canceled) An apparatus for noninvasive blood analysis comprising:		
2	a probe including a tip having a radiation outlet and a response inlet, where the probe tip is		
3	adapted to be placed in proximity to or in contact with a surface of a tissue over a big vein associated		
4	with an underside of a patient's tongue;		
5	a light generation/delivery system including a light source capable of generating at least one		
6	frequency of light, and a light conduit interconnecting the light source with the radiation outlet,		
7	where the system is adapted to deliver radiation to blood in the big vein; and		
8	a detector/analyzer system including a detector adapted to detect a response from the		
9	irradiated blood via the response inlet and an analyzer adapted to convert the detected response into		
10	a concentration of a blood component and/or a value of a parameter of the blood.		

1	58.(canceled) The apparatus of claim 57, further comprising:		
2	a display adapted to display the response, the concentration, and/or the value.		
1	59.(canceled) The apparatus of claim 57, wherein the wavelength of the radiation is from about 200		
2	nanometers to about 20 microns.		
1	60.(canceled) The apparatus of claim 57, wherein the radiation has comprises a single wavelength		
2	or frequency or a plurality of wavelengths or frequencies.		
1	61.(canceled) The apparatus of claim 57, wherein the detector is capable of detecting data derived		
2	from one or a combination of techniques selected from the group consisting of reflectance technique,		
3	confocal technique, scanning confocal technique, polarization techniques, interferometry,		
4	optoacoustics, low coherence interferometry and reflectometry, techniques based on speckle		
5	measurements, fluorescence technique, Raman scattering technique, and two or multi-photo-		
6	techniques.		
1	62.(canceled) The apparatus of claim 57, wherein the response corresponds to hemoglobin and the		
2	wavelength is selected from the group consisting of 548 nm, 568 nm, 587 nm, 805 nm, from about		
3	400 nm to about 640 nm and from about 1120 nm to about 1130 nm.		
1	63.(canceled) The apparatus of claim 57, wherein the blood component is selected from the group		
2	consisting of hematocrit, hemoglobin, glycosylated hemoglobin, hemoglobin and glycosylated		
3	hemoglobin, glucose, cholesterol, oxy-hemoglobin, deoxy-hemoglobin, and carboxy-hemoglobin		
1	64.(canceled) The apparatus of claim 57, wherein the blood component is an exogenous substance		
2	is selected from the group consisting of a drug, a dye or other reporter in molecular state or a particle		
3	made of liquid, gas, or solid material including polymer, metal, semiconductor, dielectric, or a		
4	combination of liquid, gas, or solid materials, and a layered structure.		
1	65.(canceled) The apparatus of claim 6264, wherein the exogenous substance is selected from the		
2	group consisting of indocyanine green and Evans blue.		
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l	66.(canceled) The apparatus of claim 63, wherein the exogenous substance are particles having a			
2	size from about 0.1 nanometer to about 10 microns.			
I	67.(canceled) The apparatus of claim 57, wherein the radiation is selected from the group consisting			
2	of microwave radiation, radiofrequency radiation, ultrasound radiation, and low-frequen			
3	electromagnetic radiation.			
1	68.(canceled) The apparatus of claim 57, further comprising:			
2	a device for generating a static electric or magnetic field.			
1	69.(previously presented) An apparatus for noninvasive blood analysis comprising:			
2	right side and left side sections adapted to engage one or more teeth on each of a right side			
3	and left side of a patient's jaw,			
4	two transition sections extending downwardly from each of the side sections,			
5	a middle section interposed between the two transition sections adapted to be proximate to			
6	or in contact with an underside of a patient's tongue, where the middle section includes;			
7	a emitter, and			
8	a receiver,			
9	where the emitter and the receiver are adapted to be proximate or in contact with a			
0	surface of a tissue over a big vein associated with an underside of the patient			
1	tongue;			
2	a light generation/delivery system including a light source capable of generating at least or			
3	frequency of light, and a light conduit interconnecting the light source with a radiation outlet, when			
4	the system is adapted to deliver radiation to blood in the big vein; and			
5	a detector/analyzer system including a detector adapted to detect a response from the			
6	irradiated blood via a response inlet and an analyzer adapted to convert the detected response in			
7	a concentration of a blood component and/or a value of a parameter of the blood.			
1	70.(currently amended) The apparatus of claim 5969, further comprising:			
2	a plurality of emitters and receivers, located in pairs on a right hand side and a left side of the			

3	middle section.				
1	71.(currently amended)	The apparatus of claim 6869, further comprising:			
2 a display adapted to display the response, the concentration, and/or the value.					
1	72.(currently amended)	The apparatus of claim 6869, wherein the wavelength of the radiation			
2 .	is from about 200 nanometers to about 20 microns.				
1	73.(currently amended)	The apparatus of claim 6869, wherein the radiation has comprises a			
2	single wavelength or frequency or a plurality of wavelengths or frequencies.				
1	74.(currently amended)	The apparatus of claim 6869, wherein the detector is capable of			
2	detecting data derived from	detecting data derived from one or a combination of techniques selected from the group consisting			
3	of reflectance technique, cor	of reflectance technique, confocal technique, scanning confocal technique, polarization techniques			
4	interferometry, optoacoustics, low coherence interferometry and reflectometry, techniques based o				
5	speckle measurements, fluorescence technique, Raman scattering technique, and two or multi-photo				
6	techniques.				
1	75.(currently amended)	The apparatus of claim 6869, wherein the response corresponds to			
2	hemoglobin and the waveler	ngth is selected from the group consisting of 548 nm, 568 nm, 587 nm			
3	805 nm, from about 400 nm to about 640 nm and from about 1120 nm to about 1130 nm.				
1	76.(currently amended)	The apparatus of claim 6869, wherein the blood component is selected			
2	from the group consisting of hematocrit, hemoglobin, glycosylated hemoglobin, hemoglobin an				
3	glycosylated hemoglobin, gl	glycosylated hemoglobin, glucose, cholesterol, oxy-hemoglobin, deoxy-hemoglobin, and carboxy			
4	hemoglobin.				
1	77.(currently amended)	The apparatus of claim 69, wherein the blood component is an			
2	exogenous substance is selected from the group consisting of a drug, a dye or other reporter				

molecular state or a particle made of liquid, gas, or solid material including polymer, metal,

semiconductor, dielectric, or a combination of liquid, gas, or solid materials, and a layered structure.

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- 78.(currently amended) The apparatus of claim 7477, wherein the exogenous substance is selected from the group consisting of indocyanine green and Evans blue.
- 79.(currently amended) The apparatus of claim 7577, wherein the exogenous substance are particles having a size from about 0.1 nanometer to about 10 microns.
- 1 80.(currently amended) The apparatus of claim 6869, wherein the radiation is selected from 2 the group consisting of microwave radiation, radiofrequency radiation, ultrasound radiation, and low-3 frequency electromagnetic radiation.
- 1 81.(currently amended) The apparatus of claim 6869, further comprising: 2 a device for generating a static electric or magnetic field.